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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,644	08/22/2003	Daniel R. Dorrance	HE 8711US	9784

1688 7590 05/02/2007

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EXAMINER	
CHAWAN, SHEELA C	

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
05/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/646,644	DORRANCE ET AL.	
	Examiner	Art Unit	
	Sheela C. Chawan	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *12-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/22/03,3/29/04, 5/17/04, 12/16/04, 7/5/05.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 2/28/07 has been entered.

Election/Restriction

2. In response to Applicant's amendment filed on 2/28/07 have been enter.

Applicant elects without traverse, Species I, claims 1-11.

Claims 12-23 are withdrawn.

Claims 1- 11 are pending in the application.

Drawings

3. The Examiner has approved drawings filed on 8/22/03.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 8/22/03, 3/29/04, 5/17/04,12/16/04 and 7/5/05 the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international

application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Murray et al., (US.6,728,609 B2).

As to claim 1, Murray discloses an improved machine vision vehicle wheel alignment system (fig 3, 102) having at least one camera (fig 3, 112), a computer operatively coupled to the at least one camera (fig 3, 300), the computer configured with vehicle wheel alignment software (fig 3, 300), and at least one optical target configured for attachment to a vehicle within a field of view of the at least one camera (abstract), wherein the improvement comprises:

at least one additional camera mounted to a vehicle service apparatus, said at least one additional camera operatively coupled to the computer, said at least one additional camera disposed to include at least one optical target in an associated field of view (fig 3, column 3, lines 14- 47, column 6, lines 13-60); and

wherein said computer is further configured to utilize images of the at least one optical target received from said at least one additional camera to guide the placement of the vehicle service apparatus relative to the vehicle (column 3, lines 14-47, column 6, lines 13-60).

As to claims 2 and 5, Murray discloses the improved machine vision vehicle wheel alignment system of Claim 1 wherein said computer is further configured to guide the placement of the vehicle service apparatus relative to a

rear thrust line of said associated vehicle (column 3, lines 53-57).

As to claims 3 and 6, Murray discloses the improved machine vision vehicle wheel alignment system vehicle service apparatus is vehicle collision avoidance

As to claim 4, Murray discloses an improved machine vision vehicle wheel alignment system (fig 3, 102) having at least one camera (fig 3, 110, 112), a computer operatively coupled to the at least one camera (fig 3, 300), the computer configured with vehicle wheel alignment software, and at least one optical target configured for attachment to a vehicle within a field of view of the at least one camera (fig 3, 118,120, 122, 134), wherein the improvement comprises:

at least one additional optical target configured for attachment to a vehicle service apparatus within a field of view of the at least one camera (fig 3); and

wherein said computer is further configured to utilize images of the at least one additional optical target received from the at least one camera to guide the placement of the vehicle service apparatus relative to the associated vehicle (column 6, lines 13-37).

As to claim 7, Murray discloses the improved machine vision vehicle wheel alignment system of Claim 4 wherein a field of view of the at least one camera is adjustable to selectively view the at least one optical target configured for attachment to a vehicle and to selectively view said at least one additional optical target configured for attachment to a vehicle service apparatus (fig 3).

As to claims 9 and 11, Murray discloses the method for aligning a vehicle service apparatus of Claim 8 further including the step of determining the rear thrust line of the associated vehicle from said acquired data representative of the position and orientation of one or more components of the associated vehicle (column 9, lines 28- 47); and

wherein the step of guiding further includes guiding the placement of the vehicle service apparatus relative to said rear thrust line of the associated vehicle (column 9, lines 39 - 47).

6. Claims 8 and 10, are rejected under 35 U.S.C. 102(e) as being anticipated by Jackson et al., (US.6,731,382 B2).

As to claim 8, Jackson discloses a method for aligning a vehicle service apparatus relative to an associated vehicle utilizing a machine vision vehicle wheel alignment system having at least one camera, a computer operatively coupled to the at least one camera, the computer configured with vehicle wheel alignment software, and at least one optical target configured for attachment to a vehicle within a field of view of the at least one camera (abstract), comprising the steps of:

mounting the at least one optical target on the associated vehicle in the field of view of the at least one camera (column 4, lines 1-20);

acquiring, at the computer, data representative of the position and orientation of one or more components of the associated vehicle from one or more images of the at least one optical target acquired by the at least one camera column 7, lines (1-21, column 9, lines 1-25);

mounting at least one additional camera on the vehicle service apparatus, said at least one additional camera operatively coupled to the computer and having a field of view including the at least one optical target (column 7, lines1-21, column 9, lines 1-25);

acquiring, at the computer, data representative of the position and orientation of the vehicle service apparatus from one or more images of the at least one optical target acquired by said at least one additional camera (column 7, lines1-21, column 9, lines 1-25); and

guiding the placement of the vehicle service apparatus relative to the associated vehicle utilizing said acquired position and orientation of the one or more components of the associated vehicle and said acquired position and orientation of the vehicle service apparatus (column 7, lines1-21, column 9, lines 1-25).

As to claim 10, see the rejection of claim 8.

Other prior art cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

January et al., (US.6, 064,750) discloses apparatus and method for determining vehicle wheel alignment measurements from three dimensional wheel positions and orientations.

January (US. 5,870,315) discloses apparatus and method for determining vehicle wheel alignment measurements from three dimensional wheel positions and orientations.

January (US.5,724,128) discloses apparatus and method for determining vehicle wheel alignment measurements from three dimensional wheel positions and orientations.

January (US.5,675,515) discloses apparatus and method for determining vehicle wheel alignment measurements from three dimensional wheel positions and orientations.

Colarelli, III (US.5,586,062) discloses vehicle wheel alignment utilizing wheel offset and body center line.

January (US. 5,488,472) discloses apparatus for determining vehicle wheel alignment positions and orientations.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2624
April 28, 2007

SHEELA CHAWAN
PRIMARY EXAMINER